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Fact Sheet for the Chairman, Subcommittee on Legislation and National Security, Committee on Government Operations, House of Representatives

ADP ACQUISITION

Army Civilian Personnel System

COMPLETED

GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

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March 3, 1989

The Honorable John Conyers, Jr.
Chairman, Subcommittee on Legislation
and National Security
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

On September 28, 1988, the former Chairman requested that we report on the cost of the Department of the Army's Civilian Personnel System (ACPERS). In subsequent discussions, we agreed to provide (1) a description of ACPERS and the acquisition approach being followed, (2) the current status of the system, (3) a description of the cost growth and a comparison of current cost estimates with information provided in budget exhibits to the Congress, (4) the reasons for the cost growth, and (5) a description of actions taken by the Office of the Secretary of Defense (OSD) and the Army to control costs. To expedite our reply, it was also agreed that we would not independently verify the cost information or the reasons for the cost growth provided by the Army and OSD.

ACPERS Description and Status

In 1980, the Army identified and defined the need for a single automated information system for its civilian personnel functions. According to Army documentation, the system is needed to replace three automated systems and various manual methods that do not fully support civilian personnel administration. The system will upgrade and standardize support for approximately 450,000 civilians at 174 Army offices worldwide.

In December 1984, after considering a number of alternatives for a single personnel system, the Army decided to design and develop its own system—ACPERS. One alternative considered was adopting the Air Force civilian personnel system, but it was rejected for technical reasons. In April 1988, the Army decided to abandon its development effort after a study team concluded that problems with ACPERS software could not be corrected and an additional 42 to 48 months would be needed to develop new software.

The Under Secretary of the Army decided to use the Air Force's system, known as the Personnel Data System—Civilian. In an April 29, 1988,

memorandum to the Deputy Secretary of Defense, the Under Secretary stated that while this system was slightly more costly, it was fully tested, functional, and could be partially operational sooner than a system that required developing new software. The Army plans to begin deploying the Air Force system in June 1989 and to complete deployment in December 1990.

Prior to implementing this system, however, the Army must complete ongoing activities, including testing, obtaining senior management approvals, and finalizing program management documentation. One management document, due February 1989, is the economic analysis that will provide the Army's acquisition and life cycle cost estimates for its use of the Air Force system.

ACPERS Cost Growth Is Uncertain

As a result of the Subcommittee's September 13, 1988, hearing on the Navy's Standard Automated Financial System, OSD reported that ACPERS was one of seven major automated information systems experiencing significant cost growth. Using information provided by the Army, OSD reported that the cost estimate for ACPERS increased from a 1985 figure of $65 million to a 1988 figure of $96 million.

The Army analyst who provided the information to OSD told us the $65 million figure is a December 1985 estimate of the cost to develop and deploy the Army-designed ACPERS. The official also told us that the $96 million figure was supposed to represent an October 1988 estimate of the Army's cost to develop and deploy the Air Force system. However, the ACPERS program officials and the Army analyst could not provide documentation to support the $96 million figure. Rather, these officials stated that the October 1988 estimate should have been reported as $89 million. The analyst arrived at this figure by adding fiscal years 1989 and 1990 funding estimates for use of the Air Force system to the December 1985 estimate for the Army-designed ACPERS.

According to the Army Program Executive Officer for Management Information Systems, the cost figure for using the Air Force system was based on working estimates. The Executive Officer stated that the cost estimate will not be available until February 1989, when the revised economic analysis is scheduled for completion. An ACPERS program official stated that, at that time, a comparison of cost estimates for both the Army-designed ACPERS and the Air Force system can be made, and reasons for any cost increases identified.

The Army's prior budget submissions represented the funding needs for the Army-designed system. Although the fiscal year 1988 and amended fiscal year 1989 budgets were based on this system, the Army is spending funds from both fiscal years appropriations to support its use of the Air Force system. These funds are paying for two mainframe computers, communications equipment, and site surveys, in addition to other items.

The fiscal years 1990/1991 budget request will be the first provided to the Congress reflecting the cost of using the Air Force system, according to funding documentation provided to us by the Army. Program officials state that working estimates for fiscal year 1990 of $13.5 million and fiscal year 1991 of $11.8 million will support the Army's use of the Air Force system. However, these estimates are $13.5 million less than the fiscal years 1990/1991 estimates, which total $38.8 million, for using the Air Force system as reported by the Army study team in April 1988.

Efforts to Control Cost

Until October 1988, authority to approve ACPERS system development decisions was delegated to the Army. Because of the change in acquisition strategy and reported cost growth, OSD revoked this delegation and designated ACPERS as a system to be reviewed by OSD's Major Automated Information System Review Council (MAISRC). MAISRC is the Defense Department's senior management oversight body that reviews major resource investments in general-purpose, automated data processing systems throughout development. The Council, as a representative of the Secretary of Defense, decides whether system development efforts should continue or be terminated. According to an analyst with the Office of the Assistant Secretary of Defense, Comptroller's Office, a MAISRC review is planned but not yet scheduled.

We were told that the Army has also taken actions to control ACPERS' cost. In August 1987, the program was brought under the oversight of the Army Program Executive Officer for Management Information Systems. This officer is responsible for directing, controlling, and supporting the acquisition of automated information systems, and keeping them within cost, schedule, and performance baselines.

Detailed information on ACPERS is contained in appendix I; our objective, scope, and methodology are discussed in appendix II. As agreed, we did not obtain official agency comments; however, we did discuss the contents of this fact sheet with OSD and Army officials. Their comments

were incorporated where appropriate. Our work was performed from October through December 1988.

As arranged with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from its issue date. We will then send copies to the Chairmen, Senate Committee on Governmental Affairs, and Senate and House Committees on Appropriations; the Director, Office of Management and Budget; and the Secretaries of Defense and the Army. We will also make copies available to others on request.

The major contributors to this report are listed in appendix III.

Sincerely yours,

Ralph V. Carlone

Ralph V. Carlone
Assistant Comptroller General

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Abbreviations

ACPERS	Army Civilian Personnel System
GAO	General Accounting Office
IMTEC	Information Management and Technology Division
MAISRC	Major Automated Information System Review Council
OSD	Office of the Secretary of Defense

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Army Civilian Personnel System

The Army Civilian Personnel System (ACPERS) is intended to upgrade and standardize automated data processing support capabilities for civilian personnel administration functions, such as staffing, position and pay management, and training and development. ACPERS responds to Department of Defense and Office of Management and Budget direction that the Army provide a single automated system for civilian personnel administration. Three automated personnel systems[1] and various manual methods, which do not fully support personnel activities or provide adequate capability to manage a mobilization build-up in the Army's civilian work force, will be replaced by ACPERS. This system will support approximately 450,000 Army civilians at 174 personnel offices worldwide.

Change in ACPERS Acquisition Strategy

The Army began considering various alternatives to satisfy its need for a single automated information system for civilian personnel administration in 1980. In December 1984, the Director of the Army Staff decided to design ACPERS to meet the needs of its civilian personnel functions. On April 29, 1988, the Under Secretary of the Army changed the ACPERS acquisition strategy because of software development problems. An April 1988 Army study supporting the Under Secretary's decision suggested that an additional 42 to 48 months would be needed to develop new ACPERS software. Instead of continuing Army efforts to develop software, the Under Secretary decided to adopt the Air Force Personnel Data System—Civilian. In a memorandum to the Deputy Secretary of Defense, the Under Secretary stated that the Air Force system, although slightly more costly, was a fully tested functional system that could be partially operational sooner than the Army's development effort.

Army-Designed ACPERS

In September 1980, the Army approved the ACPERS Mission Element Needs Statement, which identified and defined the Army's need for a single automated information system. According to the ACPERS system decision paper, the Army considered several personnel system alternatives during the design phase. Although one alternative was to adopt the Air Force civilian personnel system, it was rejected in September 1983 for technical reasons, including outdated hardware and software. In July 1984, the Army also considered the Defense Logistics Agency's

[1]The three Army automated personnel systems are the Standard Civilian Personnel Management Information System, Corps of Engineers Management Information System, and Civilian Personnel Accounting System.

Financial Management/Personnel Management System, but rejected that alternative because the system was in development and plans for future modules were vague.

In December 1984, the Director of the Army Staff decided to design a civilian personnel system. Factors supporting the decision included cost, compatibility with Army data processing architecture, and the expectation that the Army could utilize more modern technology than that being used by the Air Force system. In February 1987, the Army added a task order to an existing contract with Computer Sciences Corporation to develop portions of the ACPERS software. Another corporation, SAGE Federal Systems, and the Army also had responsibility for developing other portions of the ACPERS software. Computer Sciences Corporation was responsible for integrating ACPERS software developed by the three organizations.

In April 1987, the Army senior management approved the ACPERS design and gave conditional approval—pending satisfactory user test results—to begin system deployment. At that time, the Army planned to begin deployment of ACPERS in July 1987 and complete deployment by September 1988.

Because of development problems, the Army was unable to implement the deployment plan approved in April 1987. According to an October 1988 report by the Army Audit Agency,[2] the Army's Quality Assurance Directorate conducted two formal reviews of ACPERS that identified several significant shortcomings. A June 1987 critical design review showed that ACPERS program specifications had not been developed and test plans for software qualification and acceptance tests had not been completed. A second review in October 1987 showed that some functional and technical specifications for certain interfaces were incomplete and test plans had not been finalized. Officials of the Army's Program Executive Office for Management Information Systems stated that major software engineering problems were identified in November 1987. The officials told us the software, which was written by three separate organizations, could not be satisfactorily integrated.

In December 1987, a study team was established to analyze the development effort and evaluate various automated personnel system alternatives. The study team reported in April 1988 that the existing software

[2]Quality Assurance over Software Development and Maintenance, Army Audit Agency, HQ-89-200, Oct. 17, 1988.

had not been sufficiently integrated and tested to satisfy critical functional requirements and was deemed nonsalvageable. Further, the team estimated that an additional 42 to 48 months would be needed to develop new software.

The study team concluded that, although it had limitations, the alternative to adopt Air Force Personnel Data System—Civilian had the least amount of risk and offered the shortest time—27 months—to full operational capability. The study team noted that the Air Force system substantially met all critical requirements, but did not meet approximately 12 percent of the functional requirements and lacked the required external interfaces to existing Army systems.

Army's Use of the Air Force System

In order to use the Air Force system, each Army civilian personnel office will have terminals and communications capability to link with mainframe computers located at the Air Force Service Data Center, in San Antonio, Texas. ACPERS data will be input at each office terminal and processed at a centralized location.

Agreement on Army's use of the Air Force system was formalized in a September 6, 1988, memorandum of understanding. According to the agreement, the Air Force is responsible for providing software development and maintenance, communication lines from Army offices to the Air Force data center, and operational support. The Air Force will also provide assistance in planning and providing field training and data conversion. The Army will reimburse the Air Force for these services and for two to three mainframe computers.

The Army is responsible for providing equipment and engineering support needed at the field offices. According to the ACPERS manager, each field office has terminals that can be used with the Air Force system. The Army will need to procure communications equipment, such as modems, for its civilian personnel offices.

Management of ACPERS

ACPERS has already missed its original schedule for full deployment by September 1988. According to ACPERS program officials, the Air Force system should be deployed by December 1990. However, many activities have to be completed first. These include system testing, obtaining Army senior management and Major Automated Information System Review Council (MAISRC) approvals, and finalizing documentation. In

addition, the Army is working with the Air Force to satisfy the Army's unique requirements that need to be added to the Air Force system.

Testing and Deploying ACPERS

The first of two testing milestones identified by the ACPERS manager is a system acceptance test, scheduled for February 1989. This test will evaluate technical and functional aspects of the Air Force system and Army-unique software. The second milestone is a deployment test the manager plans to conduct in February 1989 to ensure that the procedures and training packages are adequate. According to the milestone schedule and to program officials, the Army plans to begin deploying the Air Force system in June 1989.

Obtaining Management Approvals

In April 1987, senior Army management approved the original ACPERS design and gave conditional approval to deploy the system. Because of the change in strategy, program officials plan to obtain senior Army management concurrence in February 1989 on the use of the Air Force system and approval to deploy the system. Because the Office of the Secretary of Defense (OSD) designated ACPERS as a major automated information system, the Army has tentatively scheduled a MAISRC meeting in March 1989 to obtain approval to deploy the Air Force system.

Finalizing ACPERS Documentation

Program management and contractual documents to support the Army's April 1988 decision to change acquisition strategies are being revised, with two exceptions—the memorandum of understanding, and one inter-service support agreement between the Departments of the Army and Air Force. The Program Management Plan, which contains the deployment plan and schedules, economic analysis, and telecommunications plan, is being finalized. According to the ACPERS manager, this document is the "road map" for managing the system through deployment. One contractual document being negotiated is the second interservice support agreement detailing the services to be provided and fees to be paid under the September 1988 memorandum of understanding between the Army and the Air Force.

Satisfying Army-Unique Requirements

According to the April 1988 study team report, the Air Force system does not satisfy approximately 12 percent of the Army-unique functional requirements and does not provide the required external interfaces to the existing Army systems. The staff of the ACPERS manager is working with the Air Force to satisfy Army-unique requirements.

ACPERS Cost Growth Is Uncertain

As a result of the September 13, 1988, hearing on the Navy's Standard Automated Financial System, OSD reported that ACPERS was one of seven automated information systems experiencing significant cost growth. According to figures provided by the Army to OSD, ACPERS cost estimates increased from $65 to $96 million.

The analyst in the Army's Director of Information Systems for Command, Control, Communications, and Computers office that provided the information to OSD told us that the $65 million figure reflects a December 1985 cost estimate to develop and deploy ACPERS. According to the analyst, the $96 million figure was supposed to represent an October 1988 estimate of the Army's cost to develop and deploy the Air Force system. However, the ACPERS program officials and the Army analyst could not provide documentation to support the $96 million figure. Rather, these officials stated that the October 1988 estimate should have been reported as $89 million. The analyst arrived at this figure by adding fiscal years 1989 and 1990 funding estimates for use of the Air Force system to the December 1985 estimate for the Army-designed ACPERS.

According to the Army Program Executive Officer for Management Information Systems, the projected cost for use of the Air Force system was based on working estimates. The Executive Officer stated that the cost estimate for use of this system will not be available until February 1989, when the revised economic analysis is scheduled for completion. At that time, the Army will be able to compare cost estimates for the Army-designed ACPERS with those for the Air Force system, and identify reasons for any cost increases.

Budget Submissions Reflect Prior Strategy

While both the fiscal year 1988 and amended fiscal year 1989 budgets represent funding required for the Army-designed system, funds from both fiscal years are being spent to support the new strategy. The Army is using $6.6 million of its $15.8 million fiscal year 1988 budget to procure two mainframe computers. The Army plans to use its fiscal year 1989 funds of $10.2 million to, among other things, procure communications equipment and conduct site surveys at each field office.

Fiscal Years 1990/1991 Submission

The Army's fiscal years 1990/1991 request should be the first budget provided to the Congress that addresses the new strategy. The Army's fiscal years 1990/1991 working estimates show an Army need of $13.5 million for fiscal year 1990 and $11.8 million in fiscal year 1991 to

support the use of the Air Force system. These budget figures are significantly less than the April 1988 Army study team estimates of $20.3 million for fiscal year 1990 and $18.5 million for fiscal year 1991. The ACPERS manager and the Resources Management Director could not comment on the study team's estimates, but stated that the working estimates for fiscal years 1990 and 1991 support the Army's use of the Air Force system.

Actions to Control Cost

Until October 1988, authority to approve ACPERS system development decisions was delegated to the Army. Because of the change in acquisition strategy and reported cost growth, OSD revoked this delegation and designated ACPERS as a major automated information system to be reviewed by MAISRC. This council is the Defense Department's senior management oversight body that reviews and approves major resource investments in general-purpose, automated information systems throughout development. According to an analyst in the Information Resources Management directorate of the Office of the Assistant Secretary of Defense, Comptroller, a MAISRC meeting is planned to discuss approval of the Army's use of the Air Force system, but a date has not been set.

We were told that the Army has also taken actions to control ACPERS' cost. In August 1987, the program was brought under the oversight of the Army Program Executive Officer for Management Information Systems. The Program Executive Officer is responsible for directing, controlling, and supporting the acquisition of automated information systems within cost, schedule, and performance baselines. The Executive Officer stated that, in the case of ACPERS, management oversight and planning are being used to "fix a broken program" and still meet the original functional requirement at minimum cost to the Army. Examples of the Army's efforts to control ACPERS costs include using existing terminals at the Army personnel offices, and using Air Force contracts to obtain hardware and services for centralized operations.

Objective, Scope, and Methodology

As requested by the former Chairman, Subcommittee on Legislation and National Security, House Committee on Government Operations, we collected information on ACPERS. Specifically, we agreed to provide (1) a description of ACPERS and the acquisition approach being followed, (2) the current status of the system, (3) a description of the cost growth and a comparison of current estimates with information provided in budget exhibits to the Congress, (4) the reasons for the cost growth, and (5) a description of actions taken by OSD and the Army to control costs.

We interviewed officials from the Army's Program Executive Office for Management Information Systems, at Fort Belvoir, Virginia, and the Office of the Director of Information Systems for Command, Control, Communications, and Computers, in Washington, D.C. Our work also included meeting with officials from the Information Resources Management directorate of the OSD Comptroller and the Office of the Assistant Secretary of Defense for Force Management and Personnel, in Washington, D.C. We examined available contractual and management documents, cost and budget estimates, existing policy and guidance instructions, and correspondence concerning ACPERS management and direction. In addition, we reviewed the April 1988 study of ACPERS alternatives supporting the Army Under Secretary's decision to change acquisition strategies. We did not independently verify the cost estimates, budget information, and reasons for cost growth provided by OSD and Army officials. Our work was performed from October through December 1988.

Appendix III

Major Contributors to This Fact Sheet

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